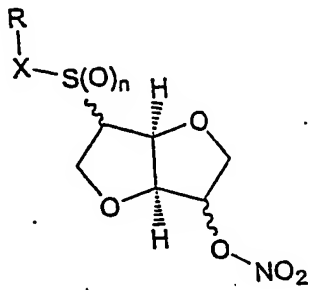
Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims:

Claim 1 (original) A compound according to formula (I) or a tautomer, a pharmaceutically acceptable salt, a prodrug or a solvate thereof:



(I)

wherein:

n is an integer of 0, 1, or 2

X represents $-S(O)_m-$, -(C=O)- or a single bond, wherein m is an integer of 0, 1, or 2, with the proviso that when X represents -(C=O)-, then n is 0,

R represents hydrogen or is a residue R^a, which residue R^a is selected from the group consisting of:

C_{1-6} alkyl;

C_{2-6} alkenyl;

C_{3-8} cycloalkyl;

C_{3-8} cycloalkyl, wherein one CH_2 group is replaced by O, S, NH or NCH_3;

C_{4-8} cycloalkenyl;

C_{4-8} cycloalkenyl, wherein one CH_2 group is replaced by O, S, N or NCH_3;

phenyl;

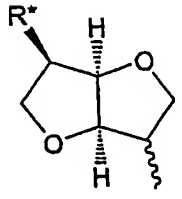
pyridyl;

thiophenyl;

nitrosyl;

S-cysteinyl;

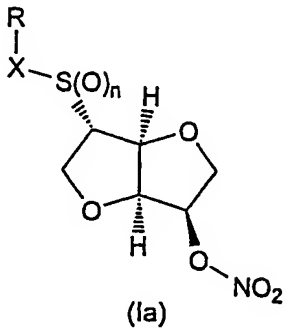
S-glutathionyl; and



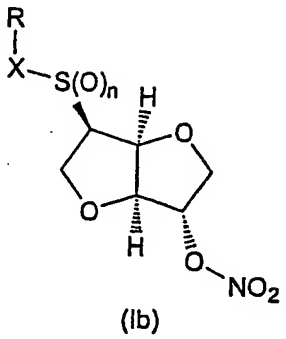
wherein R* is selected from the group consisting of hydrogen, C_{1-6} alkyl, C_{2-6} alkenyl,, C_{3-8} cycloalkyl; C_{4-8} cycloalkenyl, acetyloxy, hydroxyl, ONO_2 and halogen,

wherein R^a optionally is substituted by one to three groups independently selectd from C_{1-6} alkyl, C_{2-6} alkenyl, C_{3-8} cycloalkyl, C_{4-8} cycloalkenyl, acetyloxy, hydroxyl, ONO_2 and halogen,

provided that when $RXS(O)_n$- and $-ONO_2$ are trans to each other with respect to the ring plane as depicted in formulae (Ia) and (Ib):



(Ia)



(Ib)

then $RXS(O)_n$- does not represent  S-, wherein Z is an C_1-C_4 alkyl group, aryl group, or an aralkyl group.

Claim 2 (original) A compound according to claim 1, wherein either one or both of m and n is 0.

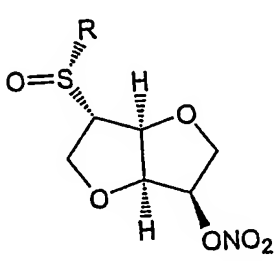
Claim 3 (currently amended) A compound according to ~~any one of claims 1 to 2,~~ claim 1, wherein X represents a single bond or -S-.

Claim 4 (currently amended) A compound according to ~~any one of claims 1 to 3,~~ claim 1, wherein R represents hydrogen, C_{1-6} alkyl, C_{2-6} alkenyl, C_{3-8} cycloalkyl, C_{4-8} cycloalkenyl, (C_{1-6} alkyl) C_{3-8} cycloalkyl, (C_{1-6} alkyl) C_{4-8}

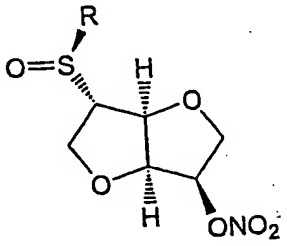
cycloalkenyl, phenyl, (C_{1-6} alkyl)phenyl, 5-acetyloxyisosorbid-2-yl, 5-hydroxyisosorbid-2-yl or 5-nitratoisosorbid-2-yl.

Claim 5 (currently amended) A compound according to ~~any one of claims 1 to 5,~~ claim 1, wherein R is C_{1-6} alkyl.

Claim 6 (currently amended) A compound according to ~~any one of claims 1 to 5,~~ claim 1, which is a compound according to formula (Ic) or Id):



(Ic)



(Id)

Claim 7 (currently amended) A compound according to ~~any one of claims 1 to 6,~~ claim 1, which is selected from:

2-thioisosorbide 5-mononitrate,

5,5'-dinitrate-2,2'-dithiodiisosorbide,

2-methylthioisosorbide 5-mononitrate,

2-[(R)-methylsulfinyl] isosorbide 5-mononitrate,

2-[(S)-methylsulfinyl]isosorbide 5-mononitrate

2-methylsulfinylisosorbide 5-mononitrate,

2-methylsulfonylisosorbide 5-mononitrate,

S-nitroso-2-thiososorbide 5-mononitrate,

2-(tetrahydropyran-2-yl-thio) isosorbide 5-monoitrate,

2-(isosorbidyl-2'dithio) isosorbide 5-mononitrate, and

2-(5'-acetyloxyisosorbidyl-2'-dithio) isosorbide 5-mononitrate.

Claim 8 (currently amended) A pharmaceutical composition comprising as active ingredients(s) at least one compound according to ~~any one of claims 1 to 7,~~ claim 1, optionally together with one or more physiologically acceptable excipient(s), activator(s), chelating agent(s) and/or stabilizer(s).

Claim 9 (original) The pharmaceutical composition according to claim 8, which further comprises a thrombolytic agent, preferably a plasminogen activator, urokinase, streptokinase, alteplase or anistreplase.

Claim 10 (currently amended) The pharmaceutical composition according to ~~claims 8 or 9~~, claim 8, which further comprises an anticoagulant agent, preferably heparin, dicoumarol, acenocoumarol, enoxaparine or pentosan polysulfate.

Claim 11 (currently amended) The pharmaceutical composition according to ~~any one of claims 8 to 10,~~ claim 8, which further comprises an antithrombotic agent, preferably acetylsalicylic acid, dipyridamole, ticlopidine, clopidrogel, triflusal, pentosan polysulfate or abciximab.

Claim 12 (currently amended) The pharmaceutical composition according to ~~any one of claims 8 to 11,~~ claim 8, which further comprises an immunoglobulin or a fragment thereof having a specificity for glycoprotein IIb/IIIa.

Claim 13 (currently amended) The pharmaceutical composition according to ~~any one of claims 8 to 12,~~ claim 8, which further comprises a hypolipemiant agent, preferably simvastatin, lovastatin, atorvastatin, pravastatin, fluvastatin, eptastatin, lifibrol, acifran, acitemate, glunicate and rosuvastatin.

Claim 14 (currently amended) The pharmaceutical composition according to ~~any one of claims 8 to 13,~~ claim 8, which further comprises an antioxidant/free radical scavenger agent, preferably nicaraven, ranolazine, emoxipin, glutatione, edaravone, raxofelast, lycopene, N-acetyl-L-cysteine, N-acetyl-D-cysteine, a racemic mixture of N-acetyl-L-cysteine and N-acetyl-D-cysteine, or carvedilol.

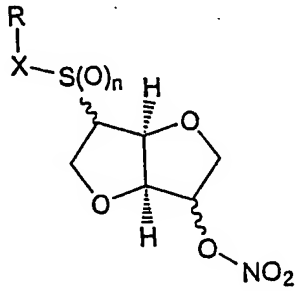
Claim 15 (currently amended) The pharmaceutical composition according to ~~any one of claims 8 to 14,~~ claim 8, for the prevention and/or treatment of atherosclerosis, endothelial dysfunctions, vasospasm, cardiac allograft vasculopathy, dysfunctions of the circulatory system, platelet activation, thrombosis, stoke, pathological conditions where oxidative stress plays an important role in their pathogenesis, pathological conditions where a deficit of nitric oxide plays an important role in their pathogenesis, and/or tissue damage due to ischemia and/or due to ischemia-reperfusion.

Claim 16 (original) The pharmaceutical composition according to claim 15, wherein the pathological conditions where oxidative stress plays an important role in their pathogenesis are selected from allergies, stroke, Alzheimer's disease, and ischemic cardiovascular diseases.

Claim 17 (currently amended) The pharmaceutical composition according to ~~any one of claims 8 to 14,~~ claim 8, for the treatment and/or prevention of dysfunctions of the circulatory system, preferably cardiovascular and/or coronary dysfunctions.

Claims 18-33 (canceled).

Claim 34 (original) A process for preparing a compound of formula (I), a tautomer, a pharmaceutically acceptable salt, a prodrug or a solvate thereof:



(I)

wherein:

n is an integer of 0, 1, or 2,

X represents $-S(O)_m-$ or a single bond, wherein m is an integer of 0, 1, or 2,

and R represents hydrogen or is a residue R^a, which residue R^a is selected from the group consisting of:

C_{1-6} alkyl;

C_{2-6} alkenyl;

C_{3-8} cycloalkyl;

C_{3-8} cycloalkyl, wherein one CH_2 group is replaced by O, S, N or NCH_3;

C_{4-8} cycloalkenyl;

C_{4-8} cycloalkenyl, wherein one CH_2 group is replaced by O, S, N or NCH_3;

phenyl;

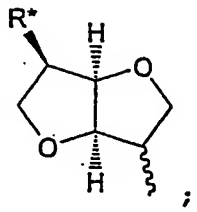
pyridyl;

thiophenyl;

nitrosyl;

S-cysteinyl;

S-glutathionyl; and

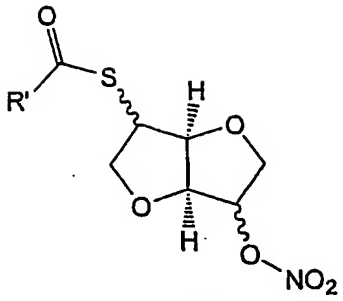


;

wherein R* is selected from the group consisting of hydrogen, C_{1-6} alkyl, C_{2-6} alkenyl, C_{3-8} cycloalkyl; C_{4-8} cycloalkenyl, acetyloxy, hydroxyl, ONO_2 and halogen,

wherein R^a optionally is substituted by one to three groups independently selected from the group consisting of C_{1-6} alkyl, C_{2-6} alkeny, C_{3-8} cycloalkyl, C_{4-8} cycloalkenyl, acetyloxy, hydroxyl, ONO_2 and halogen, which process comprises conducting the following steps:

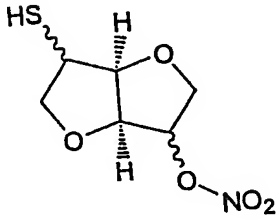
a) effecting the hydrolysis of a compound of formula (IIa):



(IIa)

wherein R' is C_1-C_6 alkyl, preferably methyl,

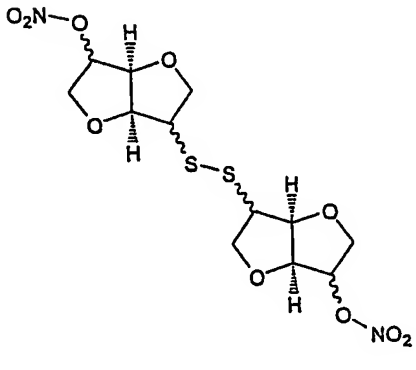
to obtain the following compound:



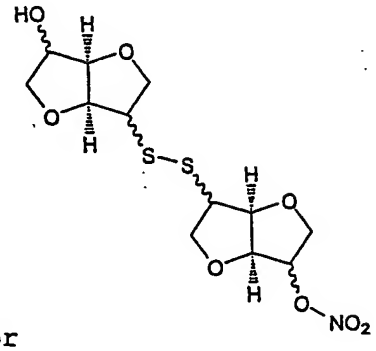
and

(b) optionally, effecting on the compound prepared according to the step (a):

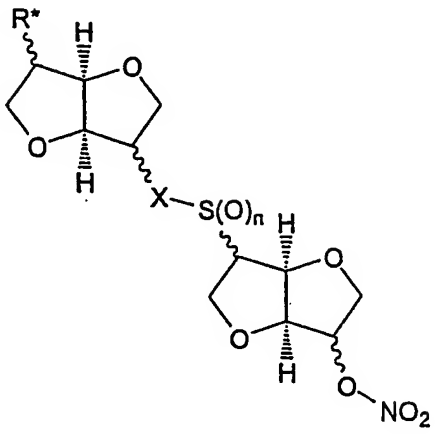
I. an oxidation reaction to obtain:



and/or



optionally followed by a second oxidation to obtain the following compound:



wherein:

n is 1 or 2,

X is $-S(O)_m-$, wherein m is 0, 1 or 2, and

R* represents hydroxyl or ONO_2;

II. a substitution reaction to obtain:

a compound according to formula (I), wherein:

n is an integer of 0,

X represents a bond,

and R does not represent nitrosyl,

optionally followed by an oxidation to obtain a compound according to formula (I), wherein:

n is an integer of 0,

X represents $-S(O)_m-$, wherein m is an integer of 0 or 1,

and R does not represent nitrosyl;

III. a substitution reaction to obtain:

a compound according to formula (I), wherein:

n is an integer of 0, and

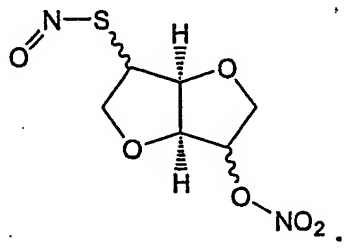
X represents -S-;

optionally followed by an oxidation to obtain a compound according to formula (I), wherein:

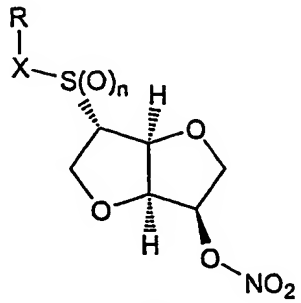
n is an integer of 1 or 2, and

X represents $-S(O)_m-$, wherein m is 0, 1 or 2; or

IV. a nitrosation reaction to obtain:



Claim 35 (original) A process according to claim 34 for preparing a compound of formula (Ia), a tautomer, a pharmaceutically acceptable salt, a prodrug or a solvate thereof:



(Ia)

wherein:

n is an integer of 0, 1, or 2,

X represents $-S(O)_m-$ or a single bond, wherein m is an integer of 0, 1, or 2,

and R represents hydrogen or is a residue R^a, which residue R^a is selected from the group consisting of:

C_{1-6} alkyl;

C_{2-6} alkenyl;

C_{3-8} cycloalkyl;

C_{3-8} cycloalkyl, wherein one CH_2 group is replaced by O, S, NH or NCH_3;

C_{4-8} cycloalkenyl;

C_{4-8} cycloalkenyl, wherein one CH_2 group is replaced by O, S, N or NCH_3;

phenyl;

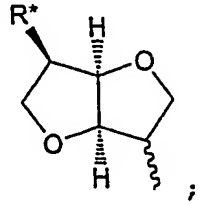
pyridyl;

thiophenyl;

nitrosyl;

S-cysteinyl;

S-glutathionyl; and



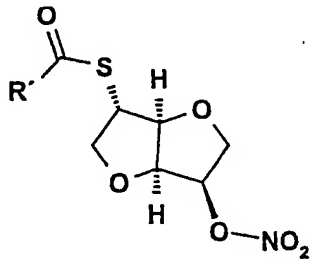
;

wherein R* is selected from the group consisting of hydrogen, C_{1-6} alkyl, C_{2-6} alkenyl, C_{3-8} cycloalkyl, C_{4-8} cycloalkenyl, acetyloxy, hydroxyl, ONO_2 and halogen,

wherein R^a optionally is substituted by one to three groups independently selected from the group consisting of C_{1-6} alkyl, C_{2-6} alkenyl, C_{3-8} cycloalkyl, C_{4-8} cycloalkenyl, acetyloxy, hydroxyl, ONO_2 and halogen,

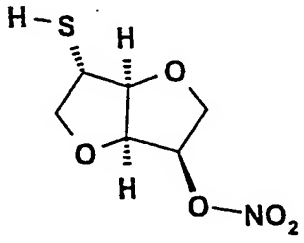
and wherein said process comprises the following steps:

(a) effecting the hydrolysis of a compound of formula (II):



(II)

wherein R' is C_{1-6} alkyl, preferably methyl, to obtain 2-thioisosorbide 5-mononitrate (1),



(1)

and

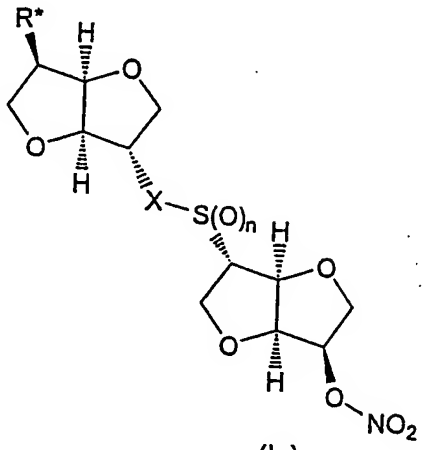
(b) optionally, effecting on the compound (1) prepared according to the step (a):

I. an oxidation reaction to obtain:

5,5'-dinitrato-2,2'-dithio-diisosorbide (2) or

2-(isosorbidyl-2'-dithio-isosorbide 5-mononitrate (8),

optionally followed by a second oxidation to obtain a compound according to formula (Ie):



(Ie)

wherein:

n is 1 or 2,

X is $-S(O)_m-$, wherein m is 0, 1 or 2, and

R* represents hydroxyl or ONO_2;

II. a substitution reaction to obtain a compound according to formula (Ia), wherein:

n is an integer of 0,

X represents a bond,

and R does not represent nitrosyl,

optionally followed by an oxidation to obtain:

a compound according to formula (Ia), wherein:

n is an integer of 0,

X represents -$S(O)_m$-, wherein m is an integer of 0 or 1,

and R does not represent nitrosyl;

III. a substitution reaction to obtain:

a compound according to formula (Ia), wherein:

n is an integer of 0, and

X represents -S-;

optionally followed by an oxidation to obtain a compound

according to formula (Ia), wherein:

n is an integer of 1 or 2, and

X represents -$S(O)_m$-, wherein m is 0, 1 or 2; or

IV. a nitrosation reaction to obtain:

S-nitroso-2-thioisosorbide 5-mononitrate (6).

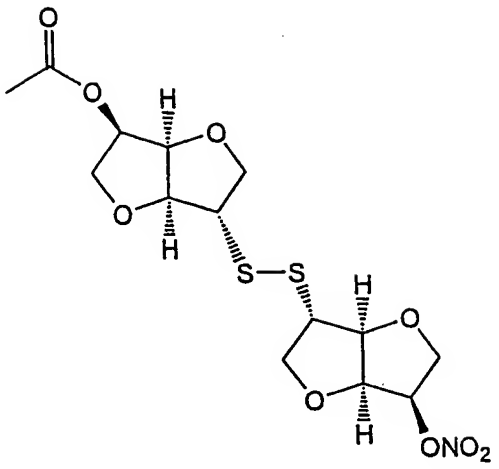
Claim 36 (currently amended) A process according to claim 34 ~~or 35~~ that includes steps (a) and (b) II for the preparation of:

2-[(R)-methylsulfinyl]isosorbide 5-mononitrate, and/or

2-[(S)-methylsulfinyl]isosorbide 5-mononitrate.

Claim 37 (original) A process according to claim 35, that includes the separation of both diastereoisomers.

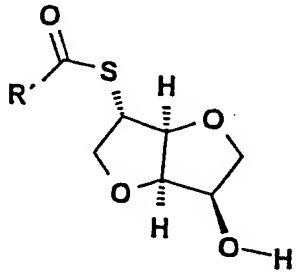
Claim 38 (original) A process for preparing a compound of formula (11) or a tautomer, a pharmaceutically acceptable salt, a prodrug or a solvate thereof:



(11)

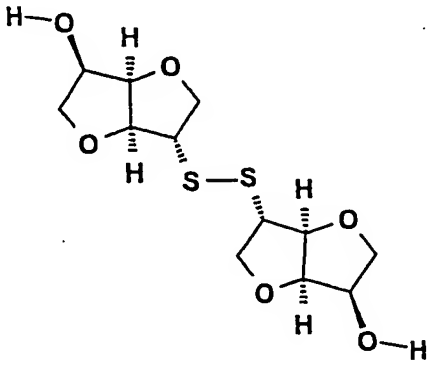
which process comprises the following steps:

a) effecting an oxidation of a compound of formula (III):



(III)

wherein R' is C_1-C_6 alkyl, preferably methyl, to obtain 2,2'-dithiodiisosorbide (10),



(10)

and

(b) effecting a nitration of the compound prepared in step (a) with a nitrating agent in the presence of a carboxylic anhydride, preferably acetic anhydride.

Claim 39 (original) 2,2'-dithiodiisosorbide.